Heat in the Field: Recognizing & Preventing Heat Stress in Outdoor Work Stats and Facts

FACTS

1. **Dehydration Onset:** Working in high heat drains body fluids quickly; dehydration reduces sweating ability, raises core temperature, and accelerates heat illness.
2. **Core Temperature Rise:** When the body absorbs more heat than it can release, internal temperature climbs fast, leading to heat exhaustion and potentially deadly heat stroke.
3. **High Humidity Stress:** Humidity slows sweat evaporation, preventing cooling and making temperatures feel significantly hotter than they are.
4. **Heat Cramps Warning:** Painful muscle cramps in legs, arms, or abdomen signal electrolyte imbalance and early heat stress requiring immediate rest.
5. **Reduced Cognitive Function:** Heat exposure impairs judgment, balance, and reaction time—raising the risk of falls, equipment mishandling, and near-miss incidents.
6. **Delayed Symptoms:** Heat illness can develop over hours; workers may feel “just tired” while their core temperature continues rising to dangerous levels.

STATS

- In British Columbia, Canada, WorkSafeBC accepted 315 heat-related injury claims from 2020-2024, with the highest numbers in outdoor sectors like construction, transportation, and public works.
- An estimated 32 million US workers perform outdoor jobs, facing 21 unsafe summer working days on average due to heat, with agriculture and construction workers at 20 times higher risk of heat-related fatalities than other industries.
- From 2020-2024, extreme heat events increased heat illness risks by 40-60% for Canadian outdoor workers in agriculture and construction due to fatigue and reduced concentration.
- In the US, occupational heat stress raises core body temperature (r=0.44), skin temperature (r=0.44), and heart rate (r=0.38) in outdoor workers, based on a meta-analysis of 2,409 monitored individuals across 38 studies.
- US agricultural workers experience heat-related mortality at a rate of 3.06 deaths per 1 million workers annually (2020-2025), 35 times the average across all industries.
- In Canada, heat stress contributes to 10-15% of lost-time claims in outdoor

sectors like farming and construction (2020-2024), with projections of $25 billion in economic costs from extreme weather by 2025.